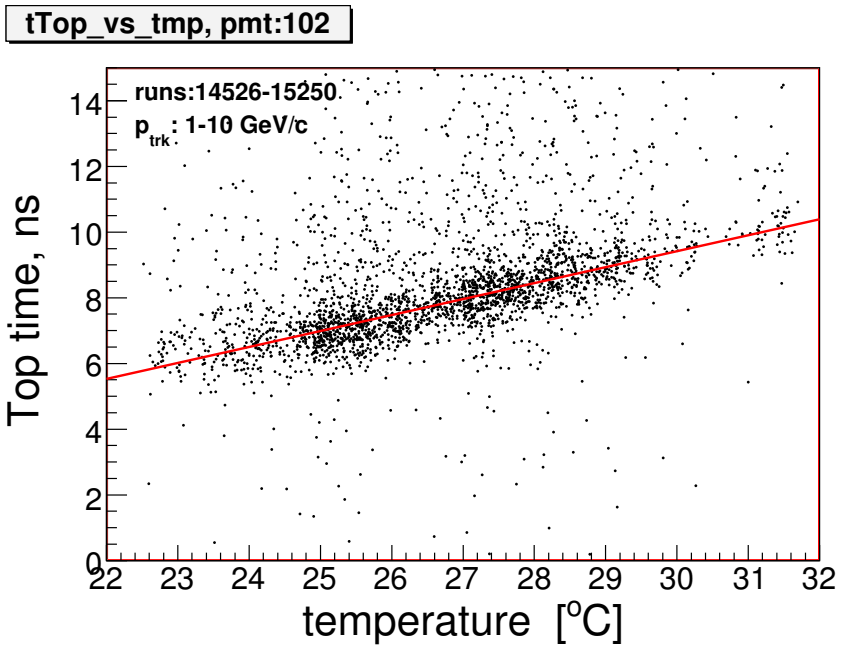
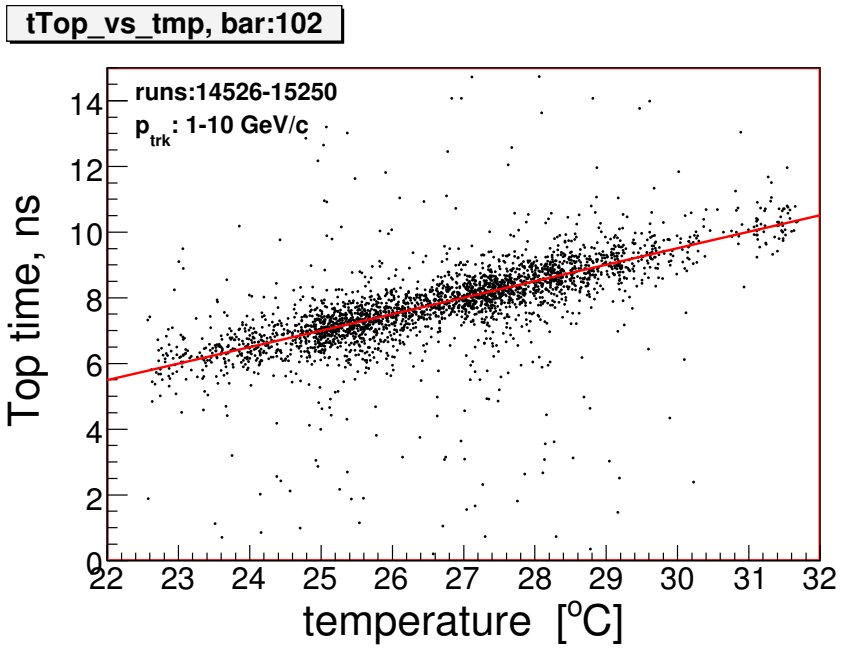
What is new?

- "...use the pion hypothesis .." it is okay for yesterday, but not good enough today
- the right hypothesis allow to get more accurate results..

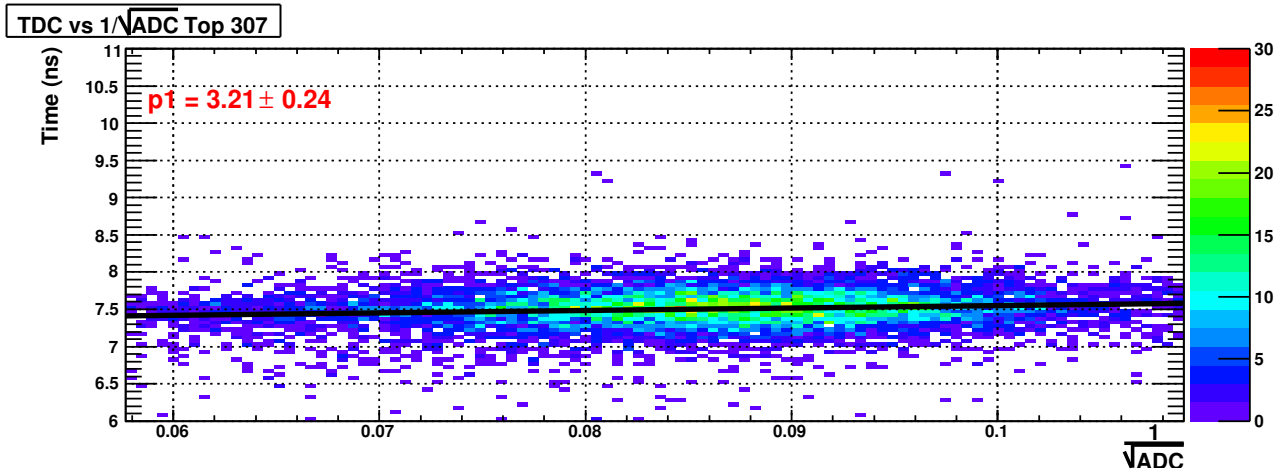
TOF time vs temperature

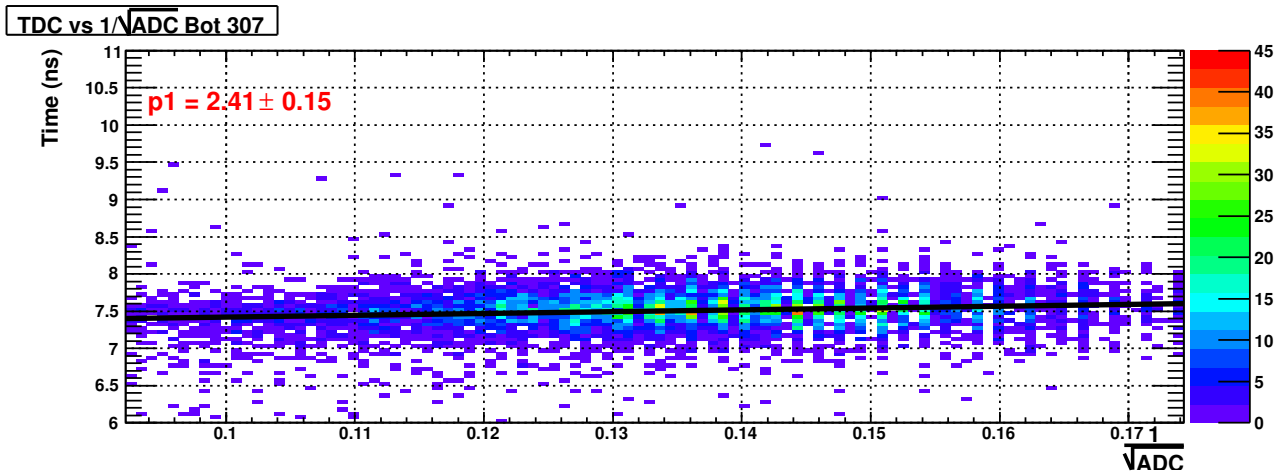




The TOF time vs the temperature. The time formula based on the pion hypothesis - left plot, with best hypothesis selection (one of π/K/p/D) - right plot. An advantage: the events at the shoulder and tails are moved into the peak region. The result is that the peak is more sharp.

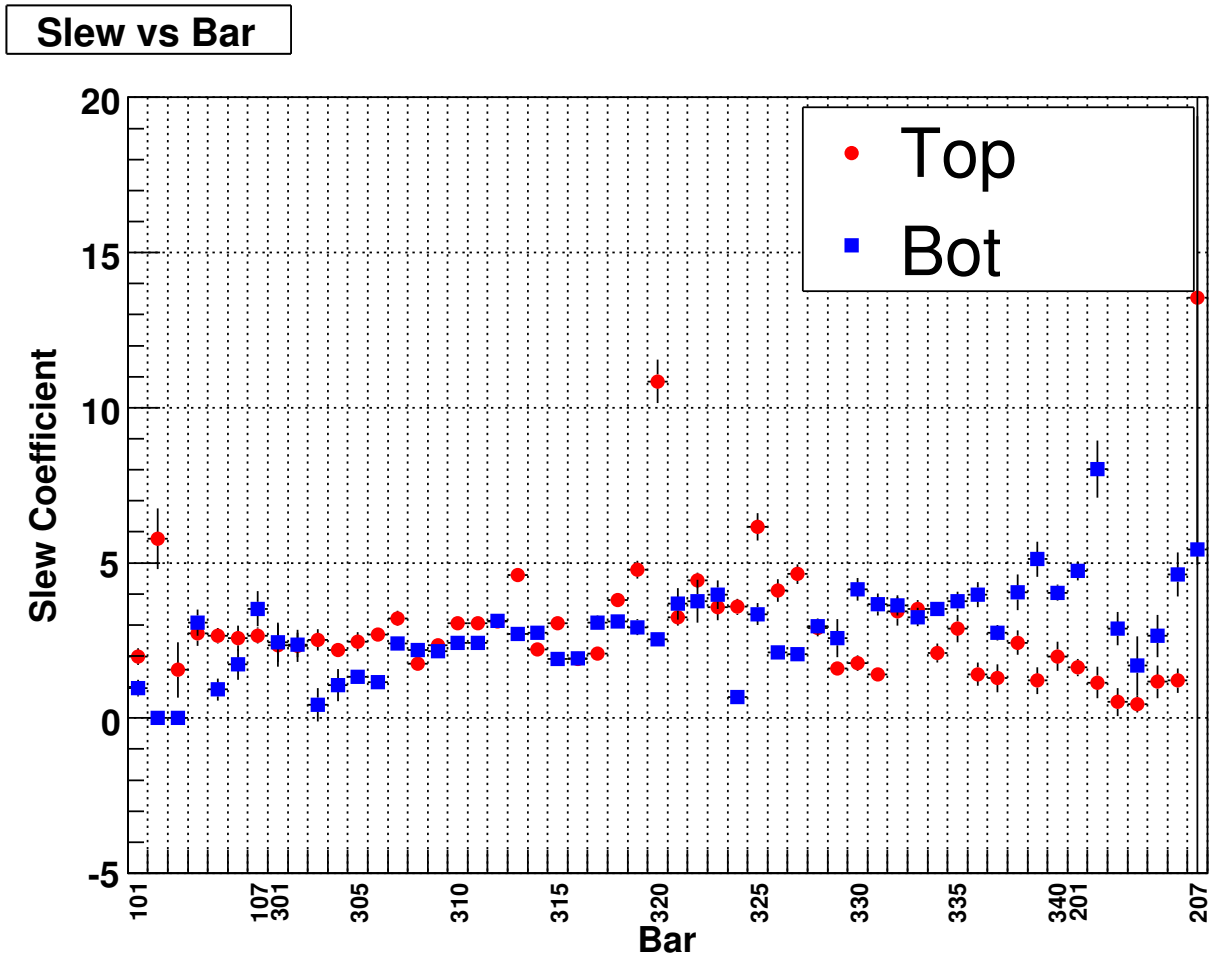
calculating the slewing coefficients





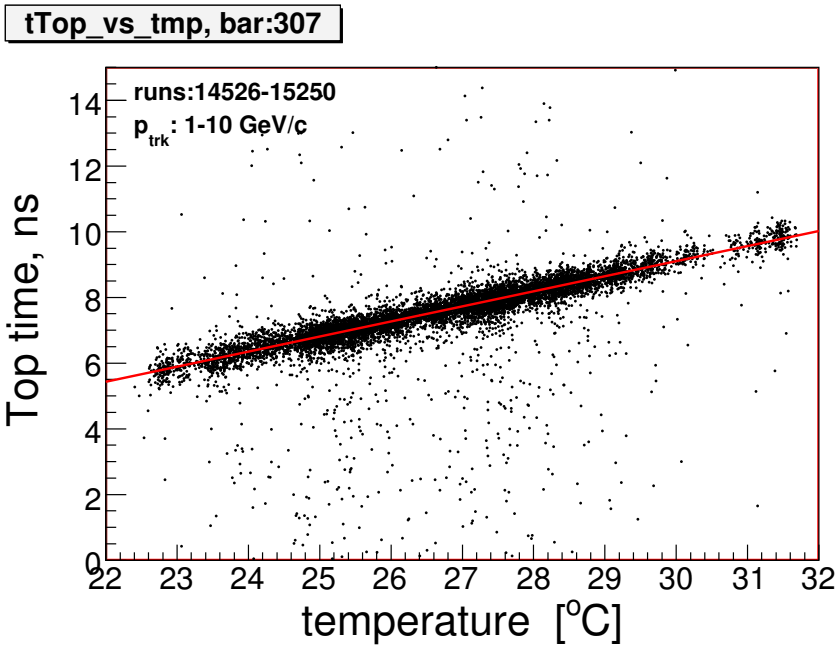
Plots illustrates the slewing effect calculation for bar 307 with NuMI data. Initial the time vs temperature coefficients and the particles hypothesis selection have been applied.

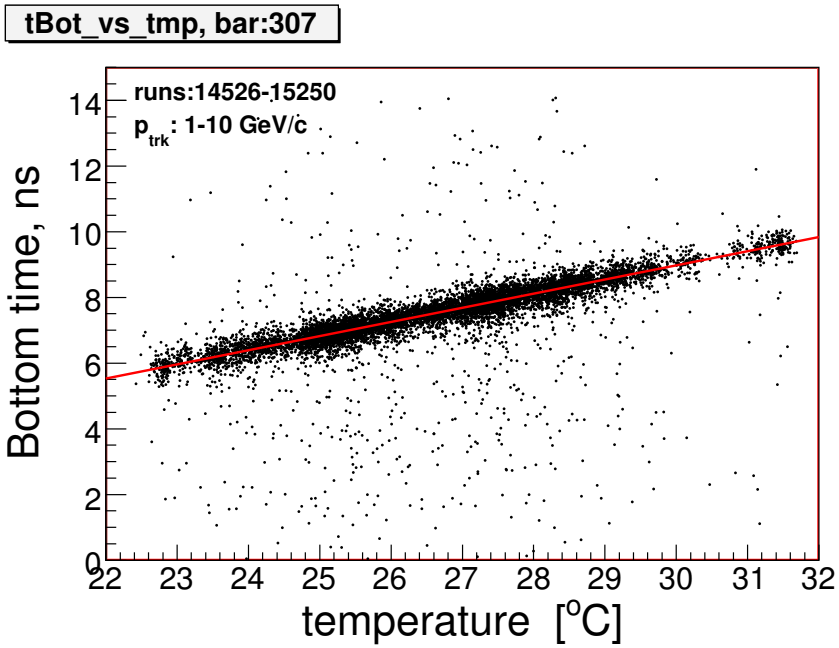
slewing coefficients vs bar



The ToF slewing coefficients vs bar number. The coefficients are significantly lower in compare with what we had before.

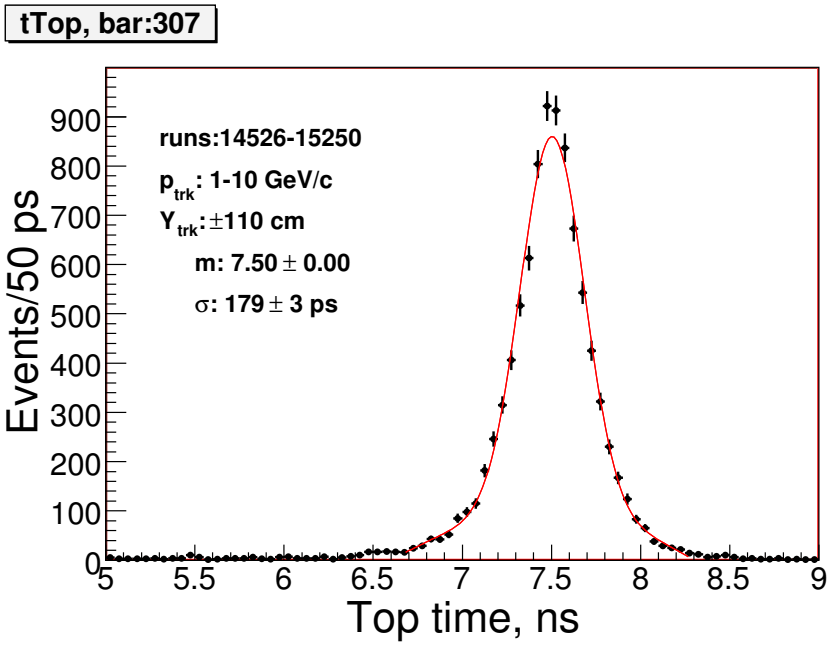
ToF time vs temperature

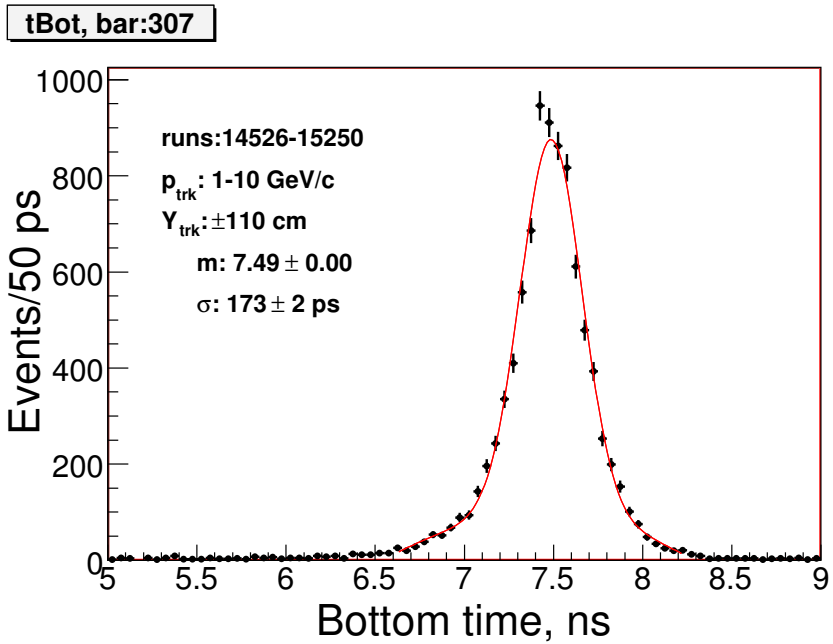




The ToF time vs the temperature, bar 307. Data: NuMI target data. After including the slewing results the time vs temperature dependence has been tuned again.

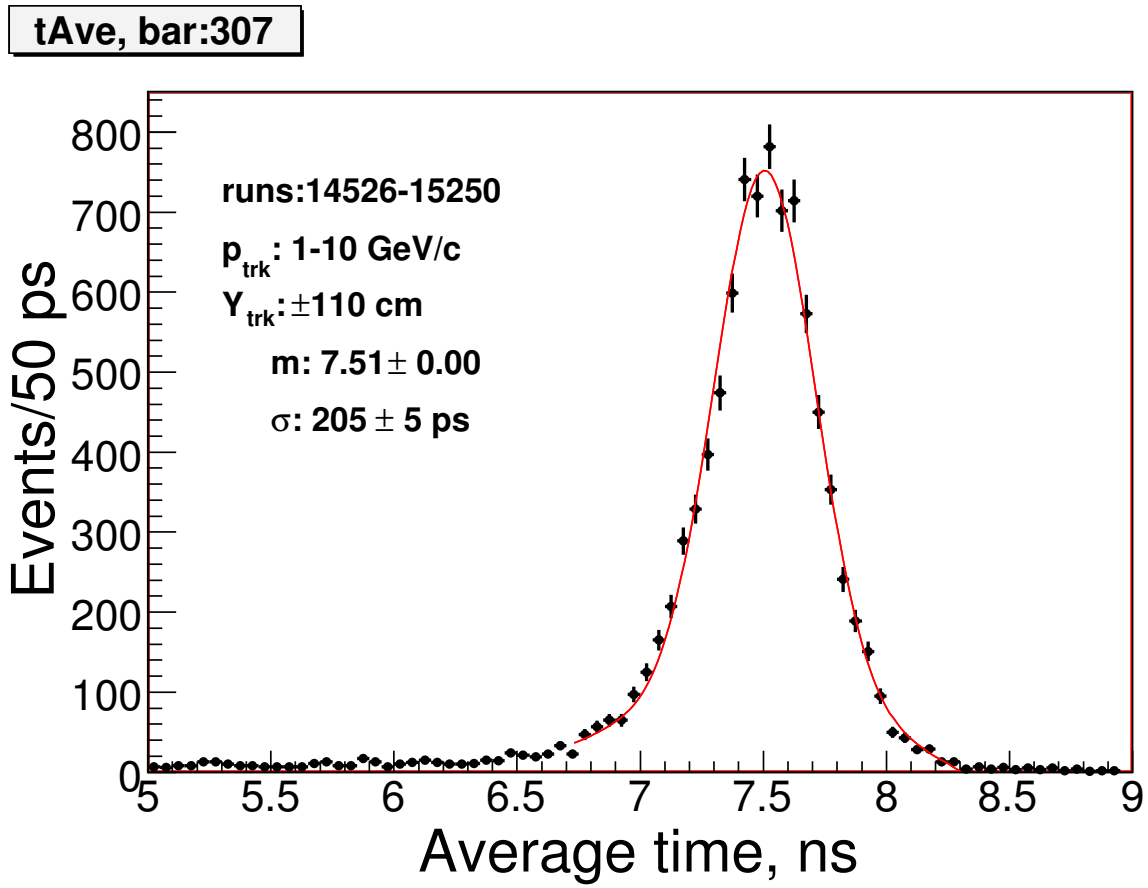
bar 307, continue





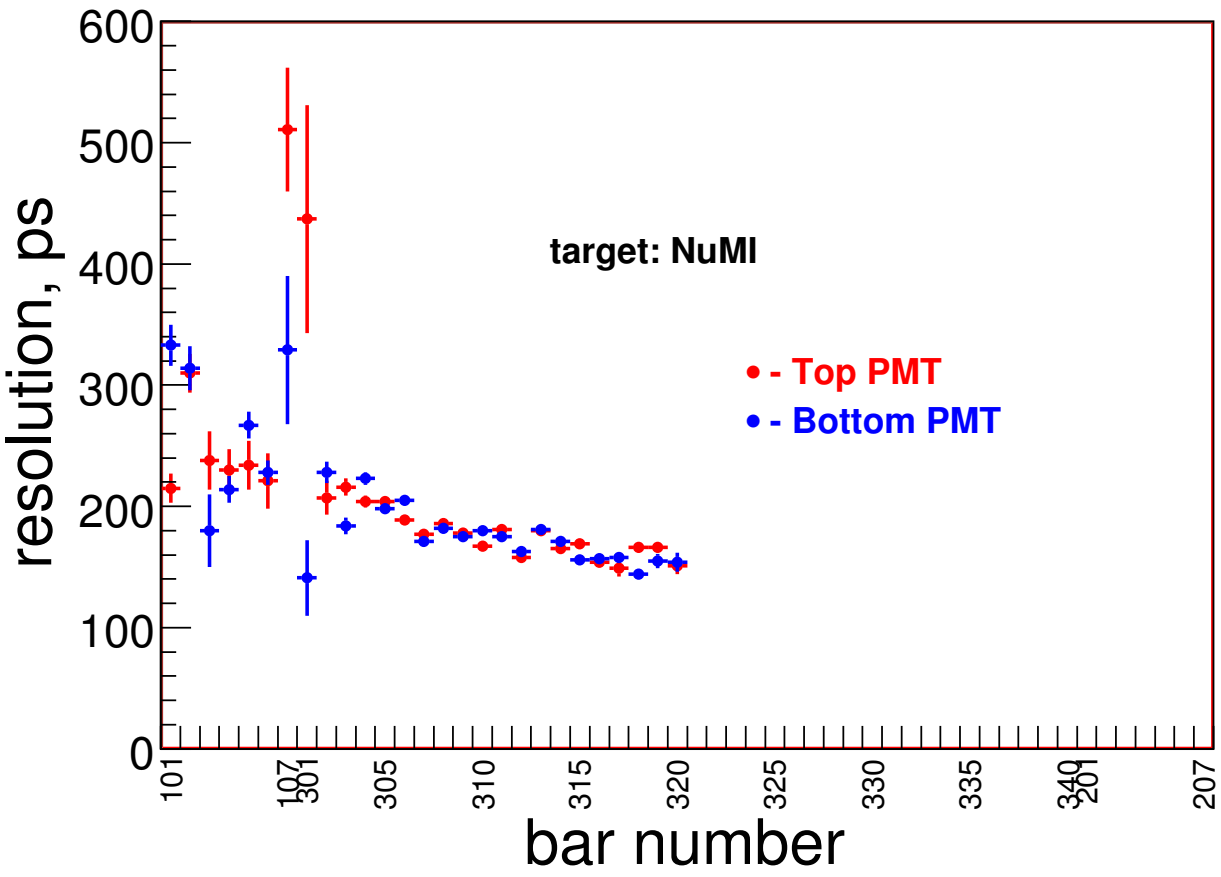
The ToF time distributions, bar 307: the top pmt - left plot, the bottom pmt - right plot. Data: NuMI target data. Our previous achievements for this bar was 260 ps.

bar 307, average time



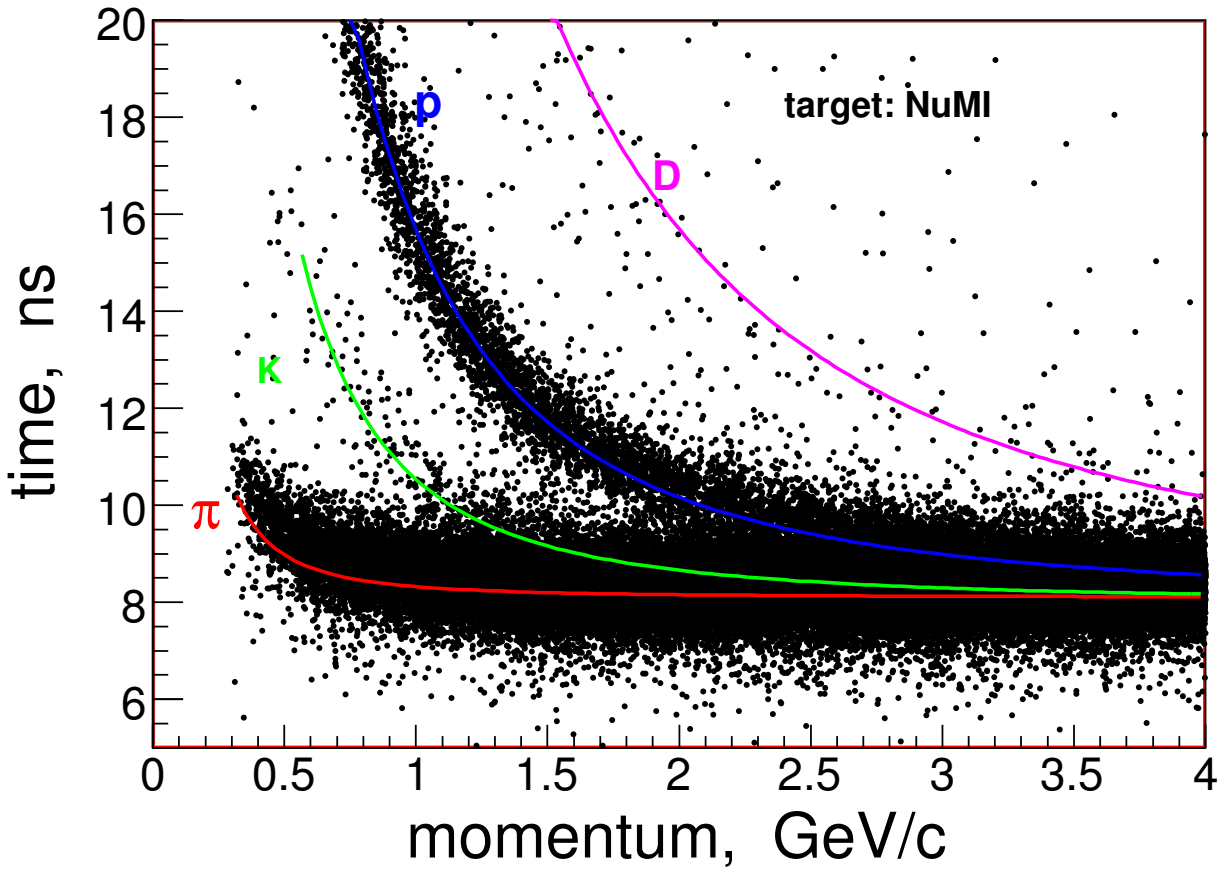
An average time distribution. Data: NuMI target data. In some cases the particle hypothesis for top pmt might not be consistent with for the bottom. Due to of that the average time distribution might be a little wider.

time resolution



ToF time resolution vs the bar number.

ToF time vs momentum



ToF time vs track momentum distribution. Target: NuMI. Data from bars 302 - 320 ($\sigma < 240$ ps) were included to this plot.